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**Datasheet for the decision
of 21 March 2022**

Case Number: T 0262/17 - 3.3.02

Application Number: 11155906.8

Publication Number: 2371935

IPC: C10M169/04, C10N30/04,
C10N30/06, C10N40/25

Language of the proceedings: EN

Title of invention:

Lubricant compositions for improved engine performance

Patent Proprietor:

Afton Chemical Corporation

Opponent:

Infineum International Limited

Headword:

Relevant legal provisions:

EPC Art. 56

RPBA Art. 12(2), 13(1)

Keyword:

Inventive step - (no)

Statement of grounds of appeal and reply - party's complete case (no)

Late-filed submissions - admitted (no)

Late-filed auxiliary request - admitted (no)

Decisions cited:

T 1083/16

Catchword:



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Case Number: T 0262/17 - 3.3.02

D E C I S I O N
of Technical Board of Appeal 3.3.02
of 21 March 2022

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
28 November 2016 concerning maintenance of the
European Patent No. 2371935 in amended form.**

Composition of the Board:

Chairman	M. O. Müller
Members:	M. Maremonti
	R. Romandini

Summary of Facts and Submissions

- I. The appeals by the patentee and the opponent lie from the decision of the opposition division finding that European patent No. 2 371 935 ("the patent"), in its form modified on the basis of the then pending fourth auxiliary request, and the invention to which it relates met the requirements of the EPC.
- II. The following documents, cited during the opposition proceedings, are mentioned in this decision:
- D1: WO 98/44079
- D2: ASTM D7320 - 09a, *Standard Test Method for Evaluation of Automotive Engine Oils in the Sequence IIIG, Spark-Ignition Engine*, 1-48
- D4: Boffa & Hirano, *Formulation Impacts on Sequence IIIG Viscosity Increase*, Society of Automotive Engineers of Japan, JSAE 20077197, 1 January 2007, 205-10
- III. The opposition division came to, *inter alia*, the following conclusion on the then pending auxiliary request 4:
- The subject-matter of claim 1 of auxiliary request 4 involved an inventive step in view of D1 (examples 2, 8, 23 and 28) taken as the closest prior art.
- IV. Both the patentee and the opponent filed an appeal against the decision of the opposition division.
- V. The parties were summoned to oral proceedings in accordance with their requests.

- VI. In preparation for the oral proceedings, the board issued a communication pursuant to Article 15(1) RPBA 2020 dated 11 May 2020. In this communication, the board expressed, *inter alia*, its preliminary opinion that all claim requests filed by the patentee in the appeal proceedings lacked inventive step in view of D1 taken as the closest prior art.
- VII. In a subsequent communication, the board informed the parties that the oral proceedings would be held by videoconference.
- VIII. By letter dated 15 March 2022, the patentee replied to the board's communication. In this reply, the patentee made submissions on inventive step by referring to experimental data filed before the opposition division contained in its letter dated 22 August 2016 and in Annex II to the minutes of the oral proceedings before the opposition division.
- IX. Oral proceedings before the board were held on 21 March 2022 by videoconference. During oral proceedings, the patentee filed auxiliary request 16.
- X. Final requests
- The patentee requested that the appealed decision be set aside and that the patent be maintained on the basis of the claims of the main request or, alternatively, auxiliary requests 1 to 15, all requests filed with its statement of grounds of appeal, or, alternatively, on the basis of auxiliary request 16, filed during the oral proceedings before the board.
- It also requested not to admit into the proceedings the opponent's submission made during oral proceedings that it was common general knowledge that compositions with Group II base oils performed better in a Sequence IIIG

engine test than compositions including Group I base oils.

The patentee also requested that the experimental data contained on pages 5 and 6 of the opponent's statement of grounds of appeal not be admitted into the proceedings.

As regards this latter request, the board came to the final decision in this case without considering the experimental data contained on pages 5 and 6 of the opponent's statement of grounds of appeal. As a consequence, a decision of the board with respect to the admittance of these experimental data was not needed.

The opponent requested that the appealed decision be set aside and that the patent be revoked.

The opponent also requested not to admit into the proceedings the patentee's submissions contained in the letter dated 15 March 2022, especially the submissions concerning the experimental data contained in the patentee's letter dated 22 August 2016 and in Annex II to the minutes of the oral proceedings before the opposition division.

XI. The patentee's arguments relevant to the present decision are summarised as follows. For further details, see the corresponding points below under the reasons for the decision.

- The submissions made in the letter dated 15 March 2022 concerning the experimental data contained in the letter dated 22 August 2016 and in Annex II to the minutes of the oral proceedings before the opposition division did not change the patentee's case and should be admitted into the appeal proceedings.

- The opponent's submission made during oral proceedings before the board that it was common general knowledge that compositions with Group II base oils performed better in the Sequence IIIG engine test than compositions including Group I base oils had not been made before in the appeal proceedings. Since it was late-filed, this submission should not be admitted into the proceedings.
- It was questionable whether document D1 represented the closest prior art. Even starting from D1, the claimed composition involved an inventive step. The same applied to the subject-matter of auxiliary requests 1 to 15.
- Auxiliary request 16 should be admitted into the proceedings.

XII. The opponent's arguments relevant to the present decision are summarised as follows.

- The patentee had not relied on the experimental data contained in the letter dated 22 August 2016 and in Annex II to the minutes of the oral proceedings before the opposition division until its letter dated 15 March 2022, i.e. only four working days before the oral proceedings before the board.
- The submissions concerning these data represented an amendment of the patentee's case filed at an extremely late stage of the appeal proceedings. Therefore, these submissions should not be admitted.
- In its statement of grounds of appeal, the opponent had referred to document D4 and also to its previous letter dated 19 August 2016. Here,

submissions had been made concerning the advantages of Group II base oils over Group I base oils as regards the viscosity increase in Sequence IIIG engine test. Thus, its submission in this respect made during oral proceedings before the board did not change its case and should be admitted into the proceedings.

- No technical effect could be achieved by the claimed composition over the whole scope of claim 1. Especially, the features distinguishing the claimed composition from document D1, in particular from the compositions of examples 2, 8, 23 and 28, did not have any technical effect.
- The skilled person would have reached the claimed solution from D1 by routine laboratory experimentation. It had to be concluded that the subject-matter of claim 1 of the main request did not involve an inventive step. The same applied to auxiliary requests 1 to 15.
- Auxiliary request 16 filed during oral proceedings before the board was not clearly allowable. It gave rise to issues at least under Articles 83 and 123(2) EPC. The issue under Article 83 EPC derived from the fact that comparative composition A of the patent performed better than composition B of the invention as regards engine deposits. The issue under Article 123(2) EPC derived from the omission of the term *synergistic* from claim 1.
- Thus, auxiliary request 16 should not be admitted into the proceedings.

Reasons for the Decision

Main request - the claimed subject-matter

1. Claim 1 of the main request reads as follows:

"1. A lubricant composition for lubricating an engine comprising:

50 to 95 wt.% of a Group II base oil of lubricating viscosity, based on the total weight of the lubricant composition;

one or more metal dialkyldithiophosphates having more than 75 mole percent of alkyl groups derived from 4-methyl-2-pentanol; and

from 0.1 to 1.0 percent by weight of a first alkali or alkaline earth metal detergent derived from an alkyl phenol, based on the total weight of the lubricant composition,

wherein the lubricant composition comprises an amount of the one or more metal dialkyldithiophosphates ranging from 0.01 to 0.10 percent by weight phosphorus based on the total weight of the lubricant composition, and wherein the lubricant composition has a total base number (TBN) of 6.5 to 10.0."

Admittance into the proceedings of the patentee's submissions in the letter dated 15 March 2022 concerning the experimental data contained in the patentee's letter dated 22 August 2016 and in Annex II to the minutes of the oral proceedings before the opposition division

2. In accordance with Article 24(1) and Article 25(3) RPBA 2020, where the summons to oral proceedings was notified before the date of entry into force of the revised version of the RPBA on 1 January 2020, Article

13(2) RPBA 2020 does not apply. Instead, Article 13 of the RPBA in the version valid until the date of the entry into force (RPBA 2007) continues to apply (see e.g. T 1083/16, reasons, points 2.1 and 2.2). In the case at hand, a first summons to oral proceedings was issued on 26 November 2019 and properly notified to the parties. Therefore, in view of the above provisions, Article 13 RPBA 2007 is to be applied in the current case as regards the admittance of e.g. the parties' submissions made after notification of the summons to oral proceedings.

3. In its letter dated 15 March 2022, i.e. four working days before the oral proceedings before the board, the patentee referred for the first time in the appeal proceedings to its experimental data contained in its letter dated 22 August 2016 and in Annex II to the minutes of the oral proceedings before the opposition division, said to prove a technical effect of some of the features distinguishing the claimed composition from the disclosure in document D1.

The opponent requested that the patentee's submissions concerning these data not be admitted into the proceedings.

- 3.1 The patentee argued that the experimental data contained in its letter dated 22 August 2016 and in Annex II to the minutes of the oral proceedings before the opposition division had been relied upon by the parties in the whole proceedings before the opposition division. Moreover, these data had been referred to by the opposition division in the appealed decision. Reference was made to points 9.5.3 and 9.5.4 of the decision, where the opposition division had acknowledged an effect of the inclusion of a Group II base oil in the claimed composition. Since these data had been referred to in the decision under appeal and

the opposition division had based its conclusion on inventive step on them, the data were also part of the appeal proceedings. The latter consisted, namely, in the judicial review of the decision under appeal.

Moreover, in its statement of grounds of appeal, page 5, point 1 and in the reply to the opponent's statement of grounds of appeal, the patentee had explicitly relied on the reasoning of the opposition division as regards the presence of an inventive step and thus implicitly also relied on these experimental data. Therefore, there was no need to elaborate on this issue any further in the appeal proceedings. The patentee had been very surprised that the board, in its preliminary opinion issued in preparation for the oral proceedings, had not considered these data. The submissions concerning these data in the letter dated 15 March 2022 had been made to give the opponent and the board the opportunity to prepare the case by concentrating on the most important issues on file from the outset of opposition proceedings and relied upon by the parties. The submissions were thus meant to enhance procedural economy rather than hinder it.

3.2 The board disagrees for the following reasons.

3.2.1 Under Article 12(2) RPBA 2007, the statement of grounds of appeal and the reply shall contain the **party's complete case**. These documents shall set out clearly and concisely the reasons why it is requested that the decision under appeal be reversed, amended or upheld, and should **specify expressly** all the facts, arguments **and evidence** relied on. The board understands this provision as requiring not only that the statement of grounds of appeal and the reply shall present all relevant facts, arguments and evidence on which the appeal relies. They must also be sufficient for this end, enabling the board to identify the content of

these statements of fact, arguments and evidence without having to refer to any other document.

It follows that facts, arguments and evidence submitted before the opposition division but not reiterated in the statement of grounds of appeal or reply are not part of a party's appeal case within the meaning of Article 12(2) RPBA 2007. This is also true when the statement of grounds of appeal or the reply include generic references to submissions made before the opposition division or to the opposition division's reasoning in the appealed decision. Such generic references do not comply with the requirement of a complete case within the meaning of Article 12(2) RPBA 2007 as interpreted by the board.

- 3.2.2 In the case at hand, since the patentee did not rely on the experimental data contained in its letter dated 22 August 2016 and in Annex II to the minutes of oral proceedings before the opposition division in its statement of grounds of appeal or reply to the opponent's statement of grounds of appeal, these experimental data and submissions referring to them were not part of the patentee's case at the start of the appeal proceedings.
- 3.2.3 As they were filed only four working days before the oral proceedings, the patentee's submissions concerning these data represent an amendment of its appeal case. Pursuant to Article 13(1) RPBA 2007, such an amendment may only be admitted and considered at the board's discretion.
- 3.2.4 Under Article 13(1) RPBA 2007, the board exercises its discretion in view of, *inter alia*, the complexity of the new subject-matter submitted, the state of the proceedings and the need for procedural economy. As set out above, the patentee's submission was made only four

days prior to the oral proceedings before the board. The proceedings were thus extremely advanced when this submission was made.

- 3.2.5 Furthermore, the board considers that the patentee's submissions in its letter dated 15 March 2022 on the experimental data contained in its letter dated 22 August 2016 and in Annex II to the minutes of oral proceedings before the opposition division raise complex issues. In fact, by admitting these new submissions, a factual assessment of the experimental data referred to would have had to be made, especially on their suitability to prove a technical effect of the features distinguishing the claimed subject-matter from the closest prior art. This would have led to an entirely *fresh case* on the issue of inventive step to be considered at an extremely late stage of the appeal proceedings for the first time. Therefore, the admittance of such a fresh case would have been contrary to procedural economy.
- 3.2.6 The patentee stated that it had been surprised that the board did not consider these experimental data in the preliminary opinion issued in preparation for the oral proceedings. However, firstly, since these data were not part of the appeal proceedings (point 3.2.2 above), the patentee had no reason to be surprised that these data were not referred to by the board. Secondly, although surprised, the patentee did not make a timely response to the board's preliminary opinion. Instead, it waited almost two years before filing submissions concerning these data with its letter dated 15 March 2022.
- 3.2.7 In exercising its discretion under Article 13(1) RPBA 2007, the board thus decided not to admit into the proceedings the patentee's submissions contained in its letter dated 15 March 2022 concerning the experimental

data contained in its letter dated 22 August 2016 and in Annex II to the minutes of oral proceedings before the opposition division.

- 3.3 As a consequence, the experimental data contained in the patentee's letter dated 22 August 2016 and in Annex II to the minutes of oral proceedings before the opposition division have to remain unconsidered.

Admittance into the proceedings of the opponent's submission that it is common general knowledge that compositions with Group II base oils perform better in the Sequence IIIG engine test than compositions including Group I base oils

4. During oral proceedings before the board, the opponent submitted that it was common general knowledge that lubricant compositions with Group II base oils performed better in the Sequence IIIG engine test than compositions including Group I base oils. It referred to document D4, specifically to figures 13 and 14 on page 209, showing the improvement of Group II base oils as regards the viscosity increase requirement of Sequence IIIG engine test over Group I base oils. The claimed selection of a Group II base oil was therefore obvious, it argued.

The patentee requested that this submission not be admitted into the proceedings.

- 4.1 In defending the admittance of its submission, the opponent argued that in its statement of grounds of appeal, page 9, it had referred to D4, a document on file for the whole opposition proceedings. On the same page, it also referred to its letter dated 19 August 2016, submitted before the opposition division and containing submissions concerning the advantages of Group II base oils over Group I base oils as regards the viscosity increase in Sequence IIIG engine test. Thus, its submission during oral proceedings before the

board had not changed its case as presented at the start of appeal proceedings.

4.2 The board disagrees for the following reasons.

4.2.1 As mentioned above (point 3.2.1), a mere reference to previous submissions made before the opposition division (here: the opponent's submissions in its letter dated 19 August 2016) does not comply with the requirement of presenting a complete case at the start of appeal proceedings, as set out in Article 12(2) RPBA 2007.

4.2.2 Page 9 of the statement of grounds of appeal as invoked by the opponent contains only a general reference to D4. It does not discuss figures 13 and 14 of this document, allegedly demonstrating the submission made at the oral proceedings before the board that it was common general knowledge that compositions with Group II base oils performed better in the Sequence IIIG engine test than compositions including Group I base oils.

4.2.3 Therefore, the opponent's submission does represent an amendment of the opponent's case filed at the latest possible stage of the appeal proceedings, which, pursuant to Article 13(1) RPBA 2007 (applicable by virtue of Article 25(3) RPBA 2020, see point 2 above), may only be admitted and considered at the board's discretion.

4.2.4 The board considers that the opponent's submission raises complex issues. In fact, by admitting it, a factual assessment of figures 13 and 14 of document D4 would have had to be made, especially on their suitability for proving that it was common general knowledge that compositions with Group II base oils performed better in the Sequence IIIG engine test than compositions including Group I base oils, making the

claimed selection of Group II base oils obvious. This would have led to an entirely *fresh* case on the issue of inventive step to be considered at the latest possible stage of the appeal proceedings for the first time. The admittance of such a fresh case would have been contrary to procedural economy.

- 4.2.5 In exercising its discretion under Article 13(1) RPBA 2007, the board thus decided not to admit into the proceedings the opponent's submission that it is common general knowledge that compositions with Group II base oils perform better in the Sequence IIIG engine test than compositions including Group I base oils.

Main request - claim 1 - ground for opposition under Article 100(a) EPC - inventive step under Article 56 EPC

5. Closest prior art

- 5.1 Document D1 was indicated in the proceedings before the opposition division (appealed decision, pages 12 and 13, point 9.2) as the closest prior art. Also, in the statements of grounds of appeal and replies, the parties argued inventive step starting from D1. In its letter dated 15 March 2022 (paragraph bridging pages 2 and 3), filed four working days before the oral proceedings, the patentee questioned for the first time whether D1 was suitable as the closest prior art under the problem/solution approach, i.e. whether a skilled person could without hindsight start from D1 to reach the invention claimed. However, the patentee did not indicate any other document as a starting point more suitable than D1 and continued arguing inventive step starting from D1.

- 5.2 The board notes that D1 (page 1, lines 3 to 12; page 8, lines 6 to 9; page 16, lines 4 to 6 and the examples) is directed to lubricant oil compositions for gasoline or diesel engines and aims at reducing wear and engine

deposits. These aims are shared by the patent (see e.g. paragraphs [0003] and [0005]).

- 5.3 In view of the above disclosure, the board considers document D1 as a suitable starting point for the assessment of inventive step.
6. Distinguishing features
- 6.1 Examples 2, 8, 23 and 28 (pages 24 to 28, tables 1 and 2) of D1 disclose lubricant compositions comprising, *inter alia*, a base oil, 1.2 wt-% of a zinc salt of a dialkyl phosphorodithioic acid containing 100 mole% of 4-methyl-2-pentyl groups (DDP2) and 1.5 wt-% (examples 2 and 23) or 2 wt-% (examples 8 and 28) of a calcium phenate. It is undisputed that DDP2 and calcium phenate fall respectively under the metal dialkyldithiophosphate and the metal detergent of claim 1 of the main request.
- 6.2 The patentee argued that the subject-matter of claim 1 differed from these examples of D1 in that the claimed composition:
- (a) comprises 50 to 95 wt-% of a Group II base oil
 - (b) comprises from 0.1 and 1.0 wt-% of the claimed detergent
 - (c) has a total base number ("TBN") of 6.5 to 10.0
 - (d) comprises from 0.01 to 0.10 percent by weight phosphorous based on the total weight of the composition as deriving from the amount of the one or more metal dialkyldithiophosphates
- 6.3 The opponent submitted that the phosphorous content defined in claim 1 to range from 0.01 and 0.1 wt-% did not represent a distinguishing feature since it was provided in said examples of D1 by the inclusion of 1.2 wt-% DDP2. The latter contained 9.45 wt-% of

phosphorous and had certainly not been used as a pure compound. Thus, it had to be assumed that the phosphorous content in the compositions of examples 2, 8, 23 and 28 of D1 fell in the claimed range.

6.4 However, the board will assume in the patentee's favour that the subject-matter of claim 1 indeed differs from the compositions of the cited examples of D1 in the above features a) to d).

7. Objective technical problem

7.1 The patentee argued that the results reported in the patent (paragraph [0070], table 3 on page 10) and the results submitted by the opponent with its statement of grounds of appeal demonstrated that compositions according to claim 1 showed an improvement in terms of Sequence IIIG test properties over comparative formulations A and C not falling under claim 1. In particular, formulation B passed the Sequence IIIG engine test.

Therefore, the technical problem solved by the combination of above-mentioned distinguishing features a) to d) had to be seen in the provision of lubricant compositions improving engine performance as demonstrated by passing the Sequence IIIG engine test. Should improvement and passing the Sequence IIIG engine test not be recognised, the technical problem should at least be seen in providing a lubricant composition that shows passing Sequence IIIG properties, e.g. weighed piston deposit rating, after cam-plus-lifter wear, prevention of stuck rings and hot oil consumption, with good and at least near-passing results in viscosity increase. It referred to page 6, first paragraph of its letter dated 15 March 2022.

7.2 The board disagrees for the following reasons.

7.2.1 Under the problem/solution approach, the objective technical problem has to be formulated in view of the technical effect(s), if any, deriving from the features distinguishing the claimed subject-matter from the closest prior art. Comparative formulations A and C of the patent (paragraph [0070]) are not representative of examples 2, 8, 23 and 28 of D1. This is because, unlike the compositions of these examples, they either do not contain a metal dialkyldithiophosphate (formulation A) or a metal detergent (formulation C) according to the definitions given in claim 1.

7.2.2 Hence, no improvement in terms of engine performance as demonstrated by the Sequence IIIG engine test has been shown with respect to the compositions of these examples of D1. In fact, according to the patent (paragraph [0071]), it is the presence of the metal dialkyldithiophosphate and the metal detergent that allows the lubricating composition to improve performance as demonstrated by passing the Sequence IIIG engine test. Since these two components are also present in the compositions of said examples of D1, if anything, it must be assumed that these compositions exhibit the same improved engine performance as the claimed compositions and at the very least pass the Sequence IIIG engine test.

7.2.3 The patentee further referred to paragraph [0007] of the patent and argued that the claimed selection of a Group II base oil (feature a) above) led to an improvement of the composition properties as assessed by the Sequence IIIG engine test as compared to other oils, e.g. Group I base oils.

However, it is already questionable whether a mere statement in a patent without adequate supporting experimental evidence may serve the purpose of proving a technical effect. But irrespective of this, paragraph

[0007] merely states that "*Surprisingly and quite unexpectedly, the additive composition containing components (i) and (ii), described above [i.e. (i) a metal dialkyldithiophosphate having more than 75 mole percent of alkyl groups derived from 4-methyl-2-pentanol; and (ii) a detergent derived from an alkyl phenol or sulfurized alkyl phenol], **may be effective** to provide a passing rating in a IIIG engine test for a Group II base oil. More specifically, the disclosed additive that includes component (i) may be surprisingly more effective in combination with a phenate detergent in a Group II base oil than one or more metal dialkyldithiophosphate having less than 75 mole percent alkyl groups derived from 4-methyl-2-pentanol. Likewise, the disclosed additive is surprisingly more effective in a Group II base oil than component (i) and other detergents in the absence of phenate detergents*" (emphasis and text in square brackets added by the board). Therefore, paragraph [0007], while stressing the importance of including both components (i) and (ii) in the lubricant composition, does not state that the inclusion of Group II base oils is essential for achieving a passing rating in the Sequence IIIG engine test, let alone for improving the composition's performances in this test as compared to other base oils. On the contrary, paragraphs [0030] and [0035] of the patent clearly state that "*Base oils suitable for use in formulating crankcase lubricant compositions may be selected from **any suitable synthetic or natural oils** or mixtures thereof*" and that "*the base oil used which may be used to make the crankcase lubricant compositions as described herein may be selected from **any of the base oils in Groups I-V** as specified in the American Petroleum Institute (API) Base Oil interchangeability Guidelines*" (emphasis added by the board). No

surprising or unexpected effect is described in the patent as being related to the specific selection of a Group II base oil (feature a) above). Paragraph [0007] quoted above instead confirms the importance of including both components (i) and (ii) in the lubricant composition. However, as set out above, both components are also included in the compositions of the examples of D1 mentioned above.

7.2.4 The patentee further argued that the improvement deriving from the selection of Group II base oils (feature a) above) had been acknowledged by the opponent at the oral proceedings before the board. While the opponent's allegation that such a finding pertained to common general knowledge had to be denied, the board should have considered the opponent's statement made in this respect at the oral proceedings confirming the above teaching in paragraph [0007] of the patent.

However, the submission made by the opponent at the oral proceedings was that it is common general knowledge that compositions with Group II base oils perform better in the Sequence IIIG engine test than compositions including Group I base oils. This submission has not been admitted into the proceedings by the board (point 4.2.5 above). In this respect, the board followed a corresponding request of the patentee. It is not possible for the patentee to artificially split the opponent's submission in two parts and request that the board not admit the part of the submission potentially going against it (i.e. that the improvement deriving from selecting a Group II base oil was part of common general knowledge, this rendering this selection obvious) but at the same time request that the board consider the other part in its favour

(i.e. the acknowledgement of an improvement deriving from the selection of Group II base oils).

Since the opponent's submission has not been admitted into the proceedings, it has to remain unconsidered as a whole.

- 7.2.5 Thus, no technical effect has been demonstrated to derive from feature a) as defined above. Also, no technical effect has been put forward by the patentee as being associated to remaining distinguishing features b) to d) when taken individually.

In view of the above considerations, no technical effect of features a) to d) distinguishing the claimed compositions from the compositions of the closest prior art has been convincingly shown. On the contrary, in the same way as the claimed compositions, it has to be assumed that the compositions of examples 2, 8, 23 and 28 of D1 would also show improved engine performance over comparative formulations A and C of the patent and would at the very least pass the Sequence IIIG engine test. Therefore, the formulations of the technical problem as proposed by the patentee cannot be accepted. Instead, the objective technical problem in view of D1 has at most to be seen in the provision of an alternative lubricant composition passing the Sequence IIIG engine test.

8. Obviousness of the claimed solution

- 8.1 The patentee argued that D1 was concerned with the problem of increased wear when the engine was operating under low-temperature conditions in the presence of ashless dispersants. It referred to page 2, lines 10 to 14; page 4, lines 6 and 7; and page 25, line 30 of D1. On the contrary, Sequence IIIG test performance, object of the claimed invention, concerned engine wear under high-speed, high-temperature service. This was

confirmed by D2, section 5.1 on page 6 and section 6.6.1 on page 7. Therefore, the objects of D1 and the claimed invention largely differed; the properties to be improved for low-temperature engine service were different from those needed for service at high temperature. D1 was completely silent as regards the properties required for a composition to pass the Sequence IIIG engine test, which was not even mentioned in D1. Thus, the patentee argued, the skilled person aiming to achieve a composition passing the Sequence IIIG engine test would not have derived from D1 any incentive to adjust the four distinguishing features a) to d) to arrive at the subject-matter of claim 1.

8.2 The board disagrees.

8.2.1 As set out above, the technical problem is not to achieve a composition passing the Sequence IIIG engine test. In fact, passing the Sequence IIIG engine test is not the technical effect of any of the distinguishing features of the claimed composition nor of their combination. Therefore, the fact that D1 mentions problems of wear occurring at low temperature has no bearing on the formulation of the technical problem that is merely to provide an alternative lubricant composition passing the Sequence IIIG engine test.

8.2.2 The board concurs with the opponent that when seeking a solution to the posed technical problem, the skilled person would have arrived at the claimed composition by routine laboratory experimentation. In fact, it has not been argued by the patentee that distinguishing features a) to d) would not have been individually known to the skilled person. In this respect, it is noted that, according to D1 (page 5, line 17 to page 7, line 23), the oil to be included in the disclosed lubricating composition may be selected from natural and synthetic lubricating oils and mixtures of them.

Unrefined, refined and re-refined oils can be used. Moreover, various types of detergents, responsible for the TBN of the lubricant composition, may be included according to the disclosure of D1 (page 20, line 24 to page 21, line 5). Also, the amount of DDP2 (corresponding to the metal dialkyldithiophosphate of claim 1) contributing to the concentration of phosphorous in the lubricant composition may, according to the general teaching of D1 (page 16, line 29 to page 18, line 2), preferably range from 0.462 to 1.122 wt-%. By considering that, as submitted by the opponent, DDP2 contains 9.45 wt-% phosphorous, this range gives rise to a large overlap with the claimed range of 0.01 to 0.1 wt-% in terms of phosphorous content of the composition.

8.2.3 Therefore, absent any technical effect, the combination of the distinguishing features a) to d) of claim 1 merely represents one among several equivalent possibilities that the skilled person aiming to solve the technical problem posed would have considered when starting from D1 without exercising any inventive skill.

8.2.4 Hence, the board concludes that the subject-matter of claim 1 of the main request does not involve an inventive step within the meaning of Article 56 EPC. Thus, the main request is not allowable.

Auxiliary requests 1 to 15 - ground for opposition under Article 100(a) EPC - inventive step under Article 56 EPC

9. Claim 1 of auxiliary requests 1 to 15 reads as follows (amendments, if any, to claim 1 of the main request highlighted by the board).

9.1 Auxiliary request 1:

"1. A lubricant composition for lubricating an engine comprising:

[...]

from 0.1 to ~~1.0~~**0.8** percent by weight of a first alkali or alkaline earth metal detergent [...], and wherein the lubricant composition has a total base number (TBN) of 6.5 to 10.0."

9.2 Auxiliary request 2:

"1. A lubricant composition for lubricating an engine comprising:

[...]

from 0.1 to 1.0 percent by weight of a first ~~alkali or alkaline earth metal~~**-containing** detergent deriving from an alkyl phenol **or sulfurized alkyl phenol** [...], and wherein the lubricant composition has a total base number (TBN) of 6.5 to 10.0."

9.3 Auxiliary request 3:

"1. A lubricant composition for lubricating an engine comprising:

[...]

from 0.1 to ~~1.0~~**0.8** percent by weight of a first ~~alkali or alkaline earth metal~~**-containing** detergent deriving from an alkyl phenol **or sulfurized alkyl phenol** [...], and wherein the lubricant composition has a total base number (TBN) of 6.5 to 10.0."

9.4 Claim 1 of auxiliary requests 4 and 8 is identical to claim 1 of the main request.

9.5 Claim 1 of auxiliary requests 5 and 9 is identical to claim 1 of auxiliary request 1.

9.6 Claim 1 of auxiliary requests 6 and 10 is identical to claim 1 of auxiliary request 2.

9.7 Claim 1 of auxiliary requests 7 and 11 is identical to claim 1 of auxiliary request 3.

9.8 Auxiliary request 12:

"1. A lubricant composition for lubricating an engine comprising:

[...]

*from ~~0.1-0.3~~ 0.3 to ~~1.0-0.6~~ 0.6 percent by weight of a first ~~alkali or alkaline earth metal~~ detergent deriving from an alkyl phenol **or sulfurized alkyl phenol** [...], and wherein the lubricant composition has a total base number (TBN) of 6.5 to 10.0."*

9.9 Claim 1 of auxiliary request 13:

"1. A lubricant composition for lubricating an engine comprising:

[...]

*from ~~0.1-0.3~~ 0.3 to ~~1.0-0.6~~ 0.6 percent by weight of a ~~first alkali or alkaline earth metal-~~**containing** detergent deriving from an alkyl phenol **or sulfurized alkyl phenol** [...], and wherein the lubricant composition has a total base number (TBN) of 6.5 to 10.0."*

9.10 Claim 1 of auxiliary requests 14 and 15 is identical to claim 1 of auxiliary request 12.

10. The patentee's arguments in support of inventive step of the subject-matter of claim 1 of auxiliary requests 1 to 15 were the same as for the main request. No additional surprising or unexpected technical effects have been put forward by the patentee as deriving from the amendments carried out in claim 1 of auxiliary requests 1 to 15.

It follows that the same observations of the board as regards lack of inventive step of claim 1 of the main request apply *mutatis mutandis* to the subject-matter of claim 1 of all auxiliary requests 1 to 15. This was not disputed by the patentee at the oral proceedings.

Therefore, the board concludes that the subject-matter of claim 1 of all auxiliary requests 1 to 15 lacks an inventive step within the meaning of Article 56 EPC.

Thus, none of auxiliary requests 1 to 15 is allowable.

Auxiliary request 16 - admittance into the proceedings

11. During oral proceedings, after having heard the board's conclusion on lack of inventive step of the main request and auxiliary requests 1 to 15, the patentee filed an additional set of claims as auxiliary request 16.

11.1 Claim 1 of auxiliary request 16 reads as follows (amendments to claim 1 of the main request highlighted by the board):

*"1. **A use of** a lubricant composition ~~for lubricating an engine~~ **for reducing engine deposits as determined by a Sequence IIIG engine test, the lubricant composition comprising:***

[...]

*from ~~0.1-0.3~~ **0.3** to ~~1.0-0.6~~ percent by weight of a first ~~alkali or alkaline earth metal~~-detergent derived from an alkyl phenol **or sulfurized alkyl phenol**, [...], and wherein the lubricant composition has a total base number (TBN) of 6.5 to 10.0."*

11.2 The opponent requested that auxiliary request 16 not be admitted into the proceedings.

11.3 The patentee argued that auxiliary request 16 had to be admitted since it had been filed in reaction to the surprising finding of lack of inventive step made by the board as regards the claim requests on file. This finding was surprising to the patentee in view of the fact that the board reached its conclusion without considering the experimental data contained in the letter dated 22 August 2016 and in Annex II to the minutes of the oral proceedings before the opposition division. Appeal proceedings were meant to judicially review the decision under appeal. It was surprising that these experimental data, despite having been part of the appealed decision, had not been admitted. The board also unreasonably disregarded the concession of the opponent that the inclusion of Group II oils in the claimed lubricant composition led to improving engine performance as demonstrated by the Sequence IIIG test. The patentee further submitted that the amendments contained in auxiliary request 16 were straightforward and addressed the objections raised by the board. The request did not raise new issues and was clearly allowable. The examples of the patent showed that engine deposits were reduced as assessed by the Sequence IIIG engine test in accordance with claim 1 of auxiliary request 16.

11.4 The board finds the patentee's argument unconvincing for the following reasons.

11.4.1 Under points 3.2.1 to 3.2.7 above, the board has given the reasons why the patentee's submissions concerning the experimental data contained in the letter dated 22 August 2016 and in Annex II to the minutes of the oral proceedings before the opposition division were not admitted into the proceedings. The patentee should have filed these submissions with its statement of grounds of appeal or reply or, at the latest, in a timely

response to the board's communication issued in preparation for the oral proceedings.

- 11.4.2 Likewise, the fact that the board had not considered these experimental data had been known to the patentee on receiving the board's communication issued in preparation for the oral proceedings. If auxiliary request 16 represented a reaction to this fact, this claim request should have been filed in a timely response to the board's communication. Instead, the patentee only filed auxiliary request 16 during the oral proceedings before the board and after having heard the board's conclusion of lack of inventive step on the requests on file.
- 11.4.3 The board set out above why it decided not to admit into the proceedings the opponent's submission made during oral proceedings that it is common general knowledge that compositions with Group II base oils perform better in the Sequence IIIG engine test than compositions including Group I base oils. Since the board reached this decision by following a request of the patentee, such a decision cannot be surprising to the patentee. Hence, the filing of auxiliary request 16 cannot be justified on this basis.
- 11.4.4 Auxiliary request 16 includes a new independent use claim 1 not filed before during the appeal proceedings. Therefore, this request represents an amendment of the patentee's case filed at the latest possible stage of the appeal proceedings, which, pursuant to Article 13(1) RPBA 2007 (applicable by virtue of Article 25(3) RPBA 2020, see point 2 above), may only be admitted and considered at the board's discretion.
- 11.4.5 The board holds that the filing of auxiliary request 16 raises complex issues. In fact, by admitting this request, a clarity assessment would have had to be made

on the significance of the feature "*for reducing engine deposits*" included in claim 1. In fact, no reference point is mentioned in claim 1 for assessing the claimed reduction. Moreover, as pointed out by the opponent, the experimental results reported in table 3 on page 10 of the patent show that comparative formulation A performs better than formulation B of the invention as regards piston deposits. Therefore, an issue of sufficiency of disclosure arises in respect of the claimed use which includes, as a feature of the claim, the reduction of engine deposits. Furthermore, the patentee indicated, *inter alia*, claim 6 as filed as the basis for claim 1 of auxiliary request 16. However, as noted by the opponent, claim 6 as filed included the feature that the mentioned mixture of metal dialkyldithiophosphate and detergent should be *synergistic*. As this feature was not included in claim 1 of auxiliary request 16, an issue under Article 123(2) EPC also arises.

11.4.6 For the above reasons, the admittance of auxiliary request 16 would have led to complex issues at least under Articles 83, 84 and 123(2) EPC to be considered at the latest possible stage of the appeal proceedings for the first time. This would have been contrary to procedural economy.

11.4.7 Therefore, in exercising its discretion under Article 13(1)RPBA 2007, the board decided not to admit auxiliary request 16 into the proceedings.

Conclusions

12. None of the claim requests of the patentee is admissible and allowable.

Order

For these reasons it is decided that:

1. The appealed decision is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



N. Maslin

M. O. Müller

Decision electronically authenticated